

DOUBLE-LUMEN CATHETER

ABSTRACT OF THE DISCLOSURE

5 A catheter is described. In one embodiment, the catheter includes: a shaft
 segment, the shaft segment including a proximal end of the catheter and a shaft
 segment central axis, the shaft segment further including a shaft segment uptake
 lumen and a shaft segment return lumen; a distal end segment coupled to the shaft
 10 segment, the distal end segment including a distal end of the catheter and a distal end
 segment central axis, the distal end segment further including a distal end segment
 uptake lumen and a distal end segment return lumen, where the distal end segment
 uptake and return lumens are coupled to the shaft segment uptake and return lumens,
 respectively; where the distal end segment central axis forms a non-zero angle with
 the shaft segment central axis when the catheter is in its unstressed configuration. In
 a second embodiment, the catheter includes: a shaft segment, the shaft segment
 15 including a proximal end of the catheter and a shaft segment central axis; a distal end
 segment coupled to the shaft segment, the distal end segment including a distal end of
 the catheter and a distal end segment central axis; where the distal end segment
 central axis is parallel to the shaft segment central axis when the catheter is in its
 unstressed configuration, further where the distal end segment includes a return
 lumen and an uptake lumen having a return lumen distal end and an uptake lumen
 20 distal end, respectively, further where the uptake lumen distal end is terminated by a
 closed surface, further where the uptake lumen distal segment includes only one side
 hole. In a third embodiment, the catheter includes: an uptake lumen including an
 uptake lumen shaft segment and an uptake lumen distal segment with an uptake
 lumen distal end; a return lumen including a return lumen shaft segment and a return
 25 lumen distal segment with a return lumen distal end; where the uptake lumen shaft
 segment is substantially parallel to the return lumen shaft segment, further where at
 least a portion of the return lumen distal segment is helically coiled around the uptake
 lumen distal end.